

# CHRS

## Cornell Hospitality Research Summit

### **Navigating Turbulent Times: Some Implications of Globalization for Tourist Destination Management**

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Cornell University  
School of Hotel Administration  
The Center for Hospitality Research

## Summary

**Globalization and Innovation:** paper summarises findings from a model of destination tourism as framed by globalization.

**Synergies and Congestion:** model demonstrates how the agglomeration of intrinsic attractions, marketing, enterprise size and scale economies, co-location, transportation, infrastructure, innovation, timing of investments, and congestion can affect the dynamics of individual destinations, in some cases provoking turbulent (i.e. chaotic) behavior.

**Navigating Turbulent Times:** model suggests a “rule” for managing unwanted fluctuations and tendencies for each phase of a destination’s growth and guiding responses to external shocks and slowdowns.

**Policy Framework:** example from a half-century of successful tourism in the Caribbean Island of Aruba and a Strategic Tourism Framework designed to answer the question “How Far and How Fast?”

# **1. Positioning the Paper: The 3C's of Concepts, Customers, and Chaos**

At first sight – since it focuses on destinations and how they are structured and evolve - my presentation might seem an outlier to the other contributions in our session and the conference as a whole. However,

- **Concepts:** My research makes considerable use of the detailed industry-level CHR work and shares concepts such as agglomeration and clustering (e.g. Enz, Kosova), capitalization and forecasting (e.g. Corgell, de Roos), branding and positioning (e.g. O'Neill, Kwortnik, Dev, Verma), innovation (e.g. Klimes, Enz), and others. The goal is to build bridges between destination- and industry-specific research and practice.
- **Customers:** Enterprises and destination share customers. They also are mutual customers: destinations are customers of the industry when they leverage jobs through subsidies and tax holidays. Hotels are customers of destinations when they negotiate prime sites and heritage through revenues, and community income and benefits. These mutual relationships are recorded (for example) in a transaction matrix (such as input output) and each can evaluate whether the net benefits of a deal makes sense for them.
- **Chaos:** Many of the papers at the CHRS are about strategy-making in the face of uncertainty (e.g. portfolios, pricing, innovation, hiring practices, liability). Enterprises and destinations share the same problems of uncertainty and turbulence and suffer the others' disturbances. Thus, anything that sheds light on, or better, reduce instability, uncertainty, and the social and economic costs of "insurance".

## 2. The Globalized Destination Tourism System

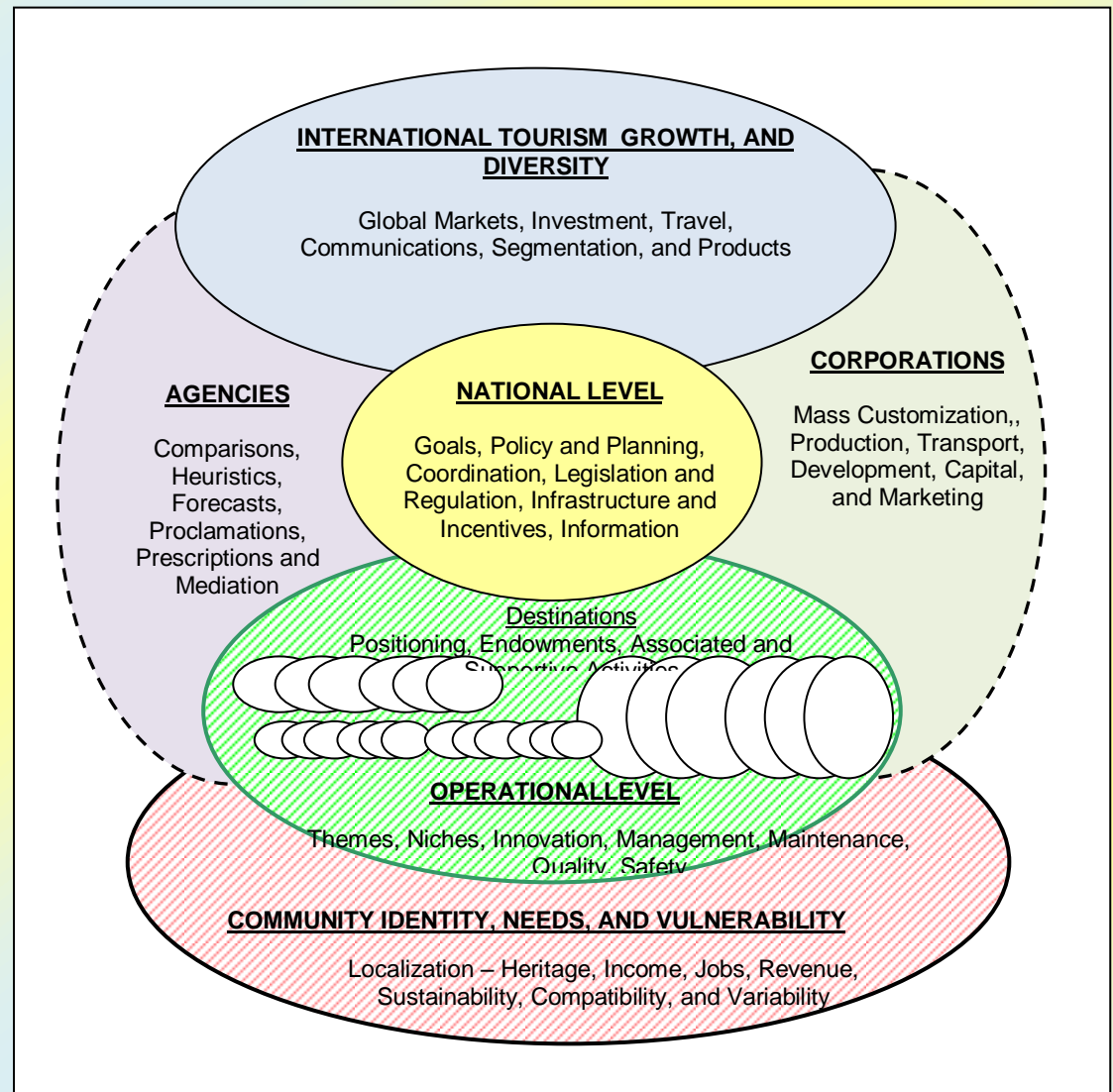
Global Markets

Mediators

Policy

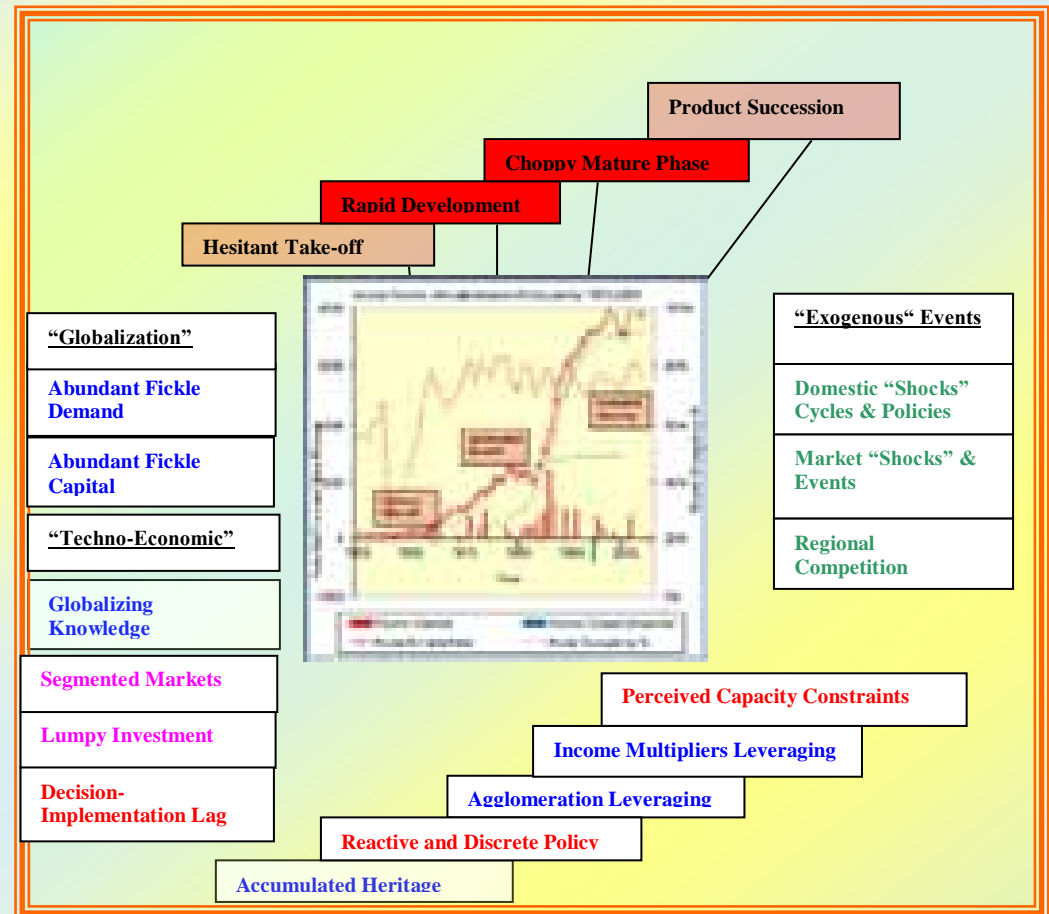
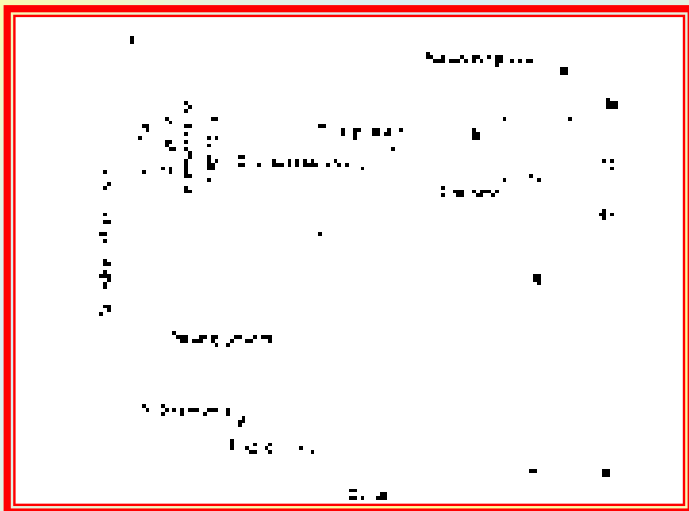
Accommodation  
and Attractions

Communities



### 3. The Life Cycle and Extensions

The model extends the widely cited TALC (Tourism Area Life Cycle) model due to Butler (1981, 2005) to account for various shocks, feedback, and disturbances, the positive effects of clustering systemic processes, policy interventions, and innovation.



## 4. Sources of Destination-level Tourism Turbulence

Several authors have called for a complexity theory of tourism (e.g. Faulkner and Russell, 1997). Destinations confront several types of turbulence.

**Shocks and “Random”  
Events**

**Structural and Non-Linear  
Dynamics**

**Complexity and  
Concatenation**

Table 1. Potential Causes of Turbulence in Tourism Destinations

<u>1 Random, Periodic, and Singular Events</u>
<ul style="list-style-type: none"><li>• Annual Local Events (Seasons, Festivals, Vacations)</li><li>• Recurrent Events (Budget Crises, Elections, Policy Shifts)</li><li>• Tourism Sector Events (Fickle Fashion, Competition, Product Succession)</li><li>• External Events (Cycles, Recessions, Natural Disasters, Terrorism)</li></ul>
<u>2 Localized Deterministic Chaos</u>
<ul style="list-style-type: none"><li>• Globalization of Demand and Investment</li><li>• Localized Agglomeration and Confection</li><li>• Lumpiness of Investment and Decision-Implementation Lags</li><li>• Economy, Demography, Environment Feedbacks and Policy</li></ul>
<u>3 System-Wide and Complex Processes</u>
<ul style="list-style-type: none"><li>• Concatenations and Contagions of 1) and 2)</li><li>• Many Actors and Structures and Inter-relationships</li><li>• Specificity and Variety of Destination and Actors</li><li>• Multi-destination Competition and Proximity, Innovation and Fashion</li><li>• Complex Evolutionary and Emergent Phenomena</li><li>• Feedback to 1) and 2)</li></ul>



## **5. TALC Stages and Issues Explored**

**Hesitant Take-off** initially depending on the lumpiness in size and timing of new hotel development and occupation a destination may require large and repeated public subsidies to reach a self-sustaining “take-off”.

**Accelerated Growth** as investor expectations for potential profitability rise above the global risk-averse hurdle due to demand and supply-side agglomeration synergies. Generally, in this phase growth of tourist and downstream activities is rapid (above exponential) and relatively smooth.

**Rapid Slowdown** once the destination begins to reach saturation due to physical congestion, environmental or cultural degradation, and social problems. Because of locked-in decisions there may be overshoot, fluctuations, and turbulence.

**Growth Rates and Fluctuations** may be modulated through adjusting public-sector leveraging, via support to and revenues from tourist enterprises to maintain a specified growth propensity.

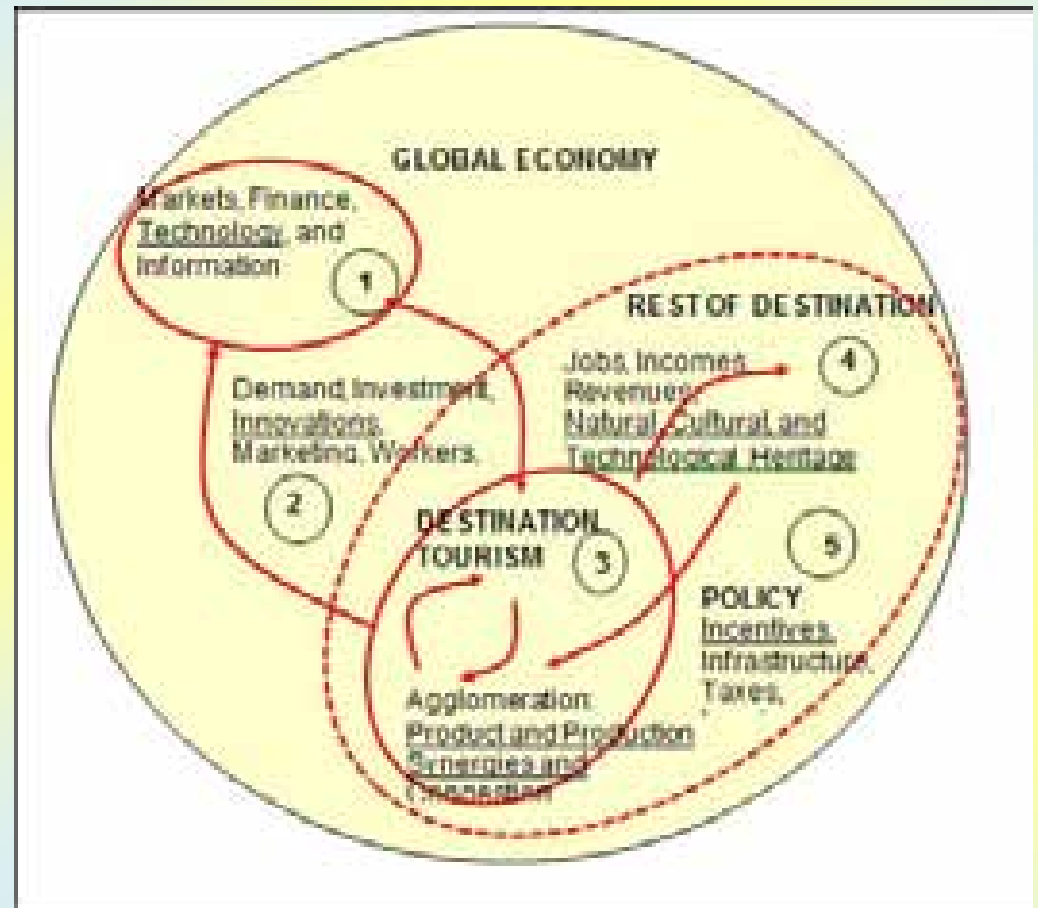
**Innovation of Products, Process, and Value** can exacerbate or quell turbulence, but there is a tendency for global completion to offset local innovation so destinations are “running to stand still”.

## 6. A Global, Destination, and Enterprise-Level Model

**Global Level:** the model accounts for the relative abundance of demand, finance, information and uncertainty.

**Destination Level:** the model extends the tourist area life cycle (TALC) to include the positive synergistic relationships between tourist-related activities and other intrinsic and competitive attributes such as marketing and access.

**Enterprise Level:** the model takes account of discrete hospitality industry activities the size of enterprises, capitalization, time-to-develop, profitability, and capacity utilization.



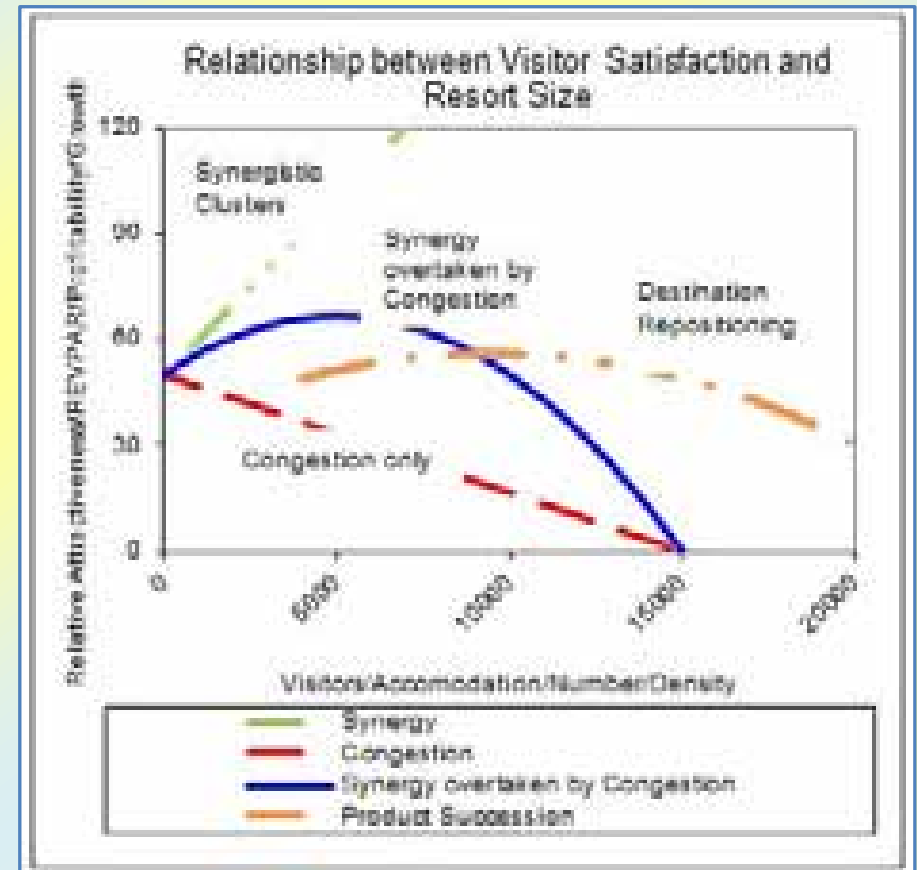


## **7. Tourism Clusters, Synergies, and Congestion**

Increased size facilitates profitable synergies between accommodation and other tourist attractions,

But eventually leads to congestion, making the destination less attractive, and hence less investment-worthy.

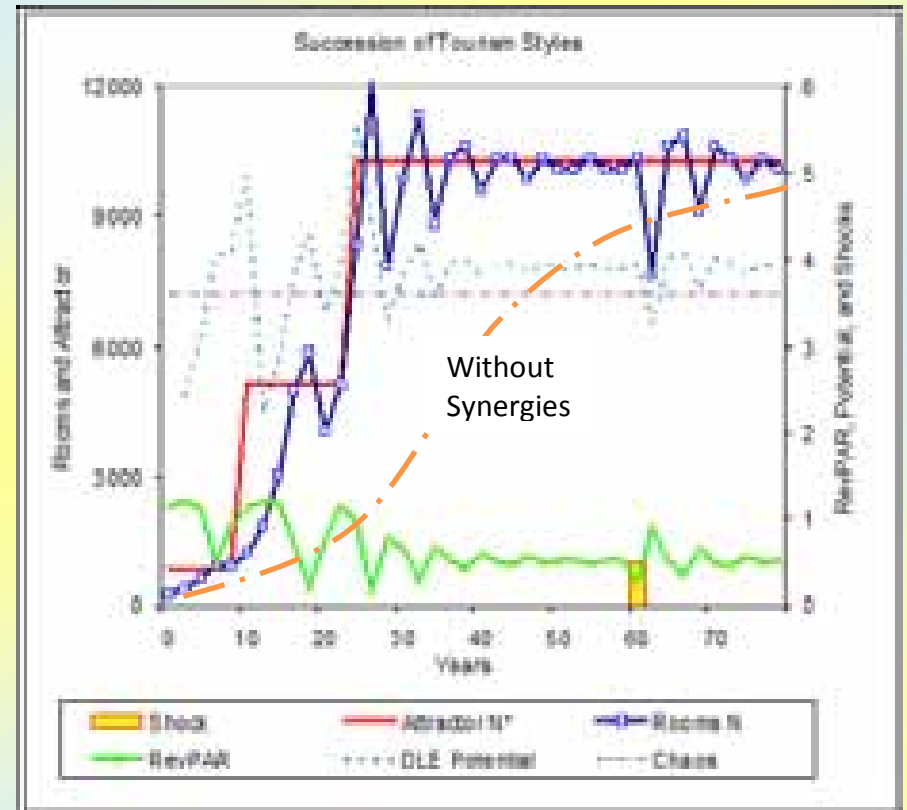
For each destination and market segment, performance as measured by visitor satisfaction, spending, and profitability is an inverse-U curve.



The tension between positioning, congestion, uncertainty, and competition pushes product, process, variety and value innovations (efficiency, management, marketing, organization, portfolio, finance, etc.)

## 8. Unsteady Take-off, Accelerated Growth, Overshoot, and Chaos

1. Lumpy investment and marketing delays initially depress average occupancy rates, profitability, and investment.
2. Agglomeration synergies then accelerate growth leading to overshoot as congestion increases. This is followed by an oscillatory pattern as hotels open and close.
3. The model parameters (costs, breakeven, etc.) dictate the succession of tourism styles at a resort.
4. This example also shows also how an exogenous demand shock (a one-period adjustment to destination attractiveness) pushes the system towards chaos.

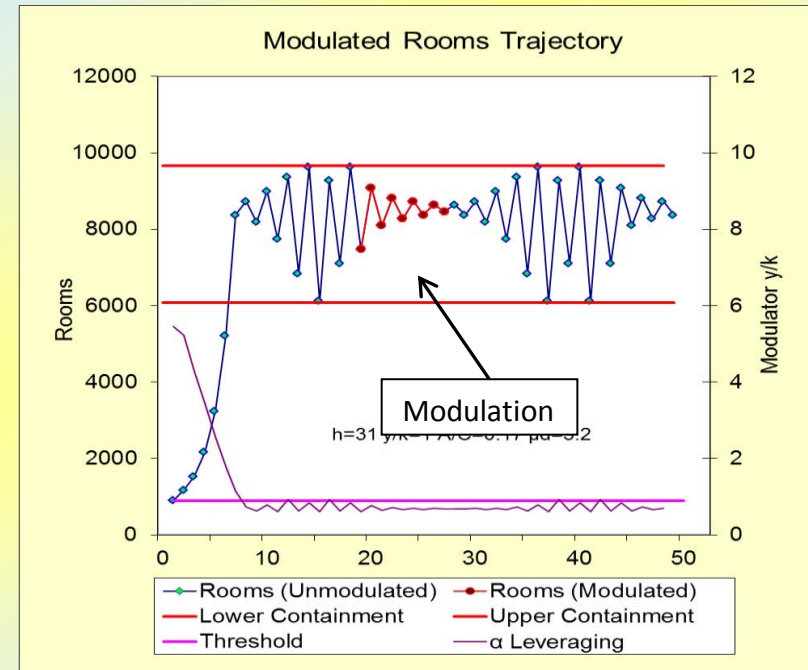


## 9. Growth Potential, Deterministic Chaos and Risk Tolerance

The source of destination tourism's "deterministic chaos" is imperfect investment planning: decisions based on conditions from one point in time are implemented in another when the conditions have changed.

If the time lag is sufficiently long, the growth potential sufficiently high and the system at a critically sensitive point the resulting mismatch between supply and demand cannot be overcome by market adjustment, leading to chaos-like pathologies.

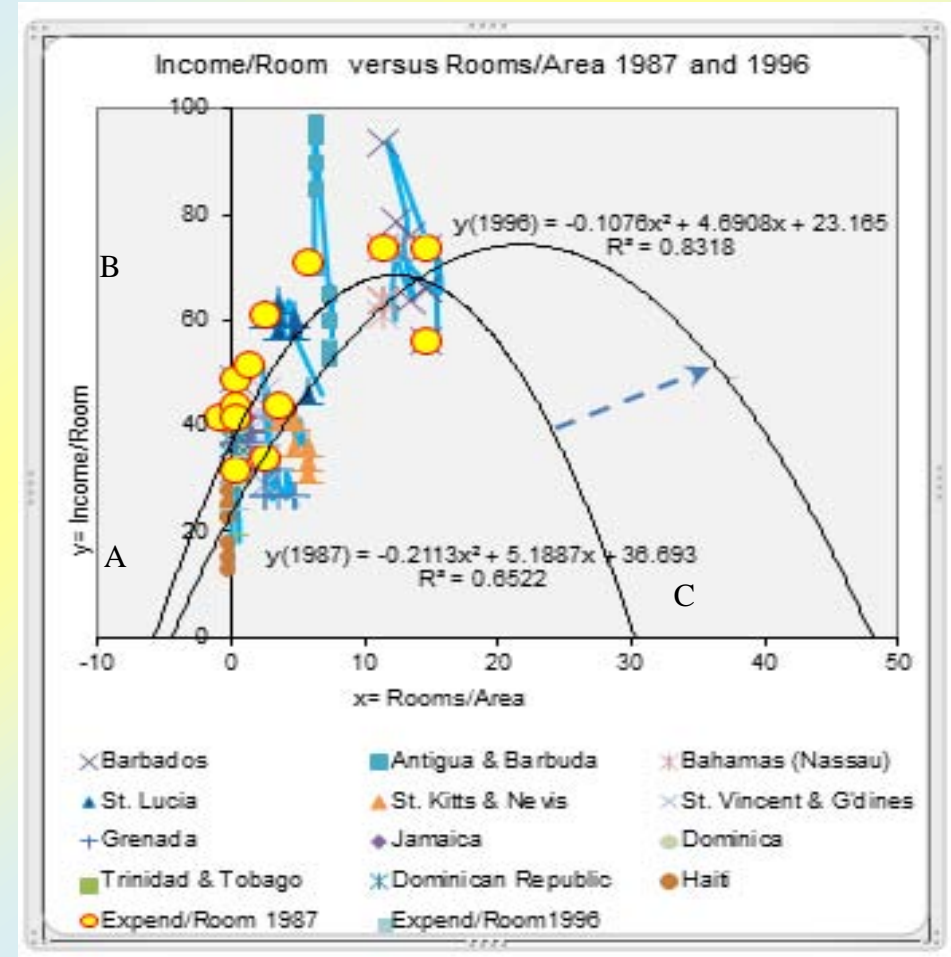
Since the model anticipates short-run rapid changes, matching the growth propensity to a destination's risk tolerance (or chaos propensity) allows us to moderate fluctuations by, for example, having the public sector fine-tune its leveraging and deleveraging of private sector investment.



## 10. Aggregate Destination Product, Process, and Value Innovation

The inverse-U relationship has been estimated against a cross-section of destinations in the Caribbean showing how both synergy and congestion are enhanced or offset over time by innovations.

The shift over time shows how “aggregate innovation” at a destination in a globally competitive market affects the dynamics of destination development.

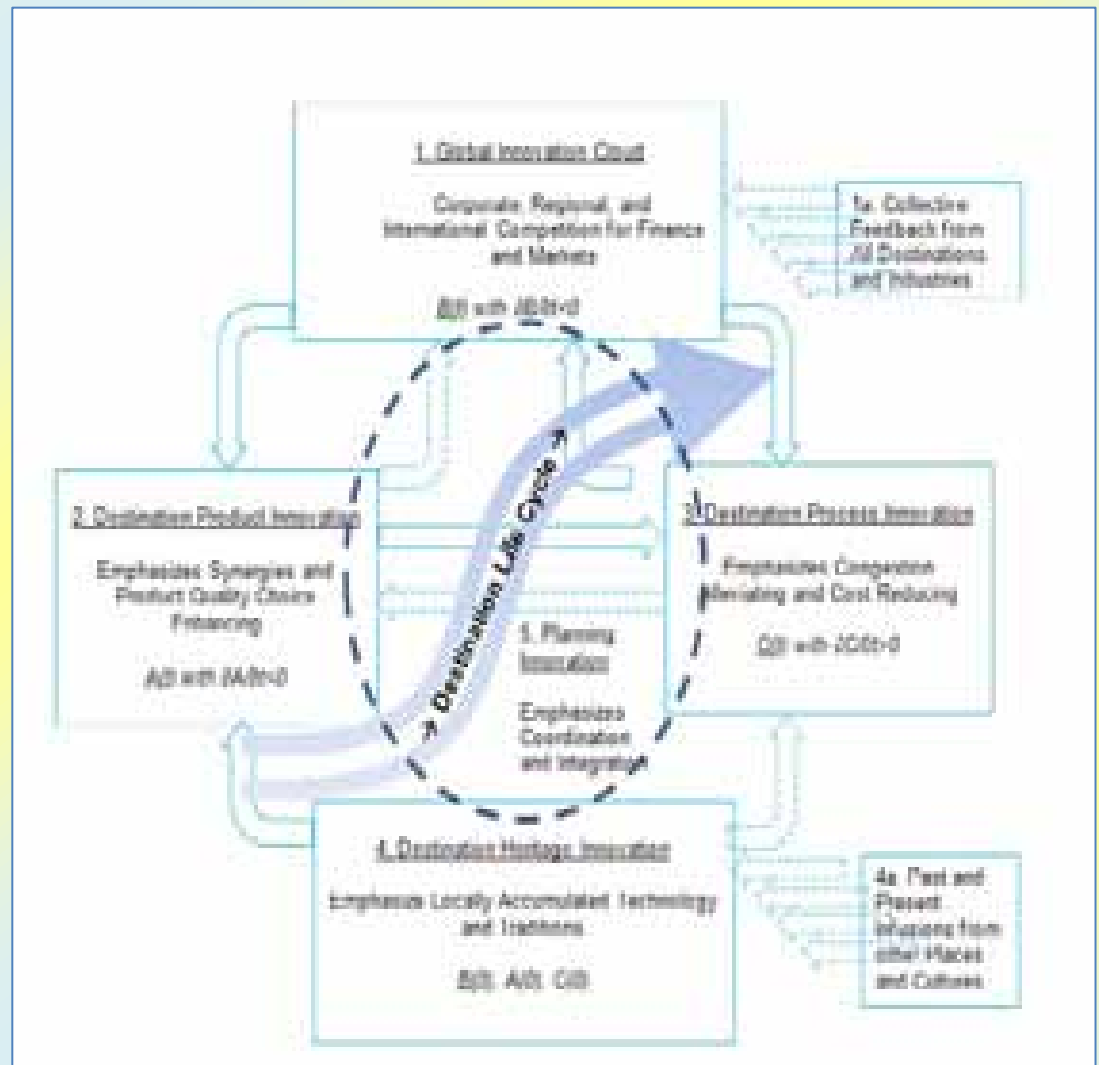


Hjalager (2011) has called for a theory of aggregate destination-level Innovation. The model sheds some light on this. Destination “aggregate innovation” includes everything perceived to be “new”....

## 11. The Global Tourism Innovation Cloud

A conceptual framework of how local innovation systems interact with global markets and the global innovation “cloud” is used to illustrate the implications for the management of destination innovation, positioning, and growth.

This involves the bringing together of the “unique” local heritage innovations and global innovations and markets to discern and maintain a distinctive destination personality.



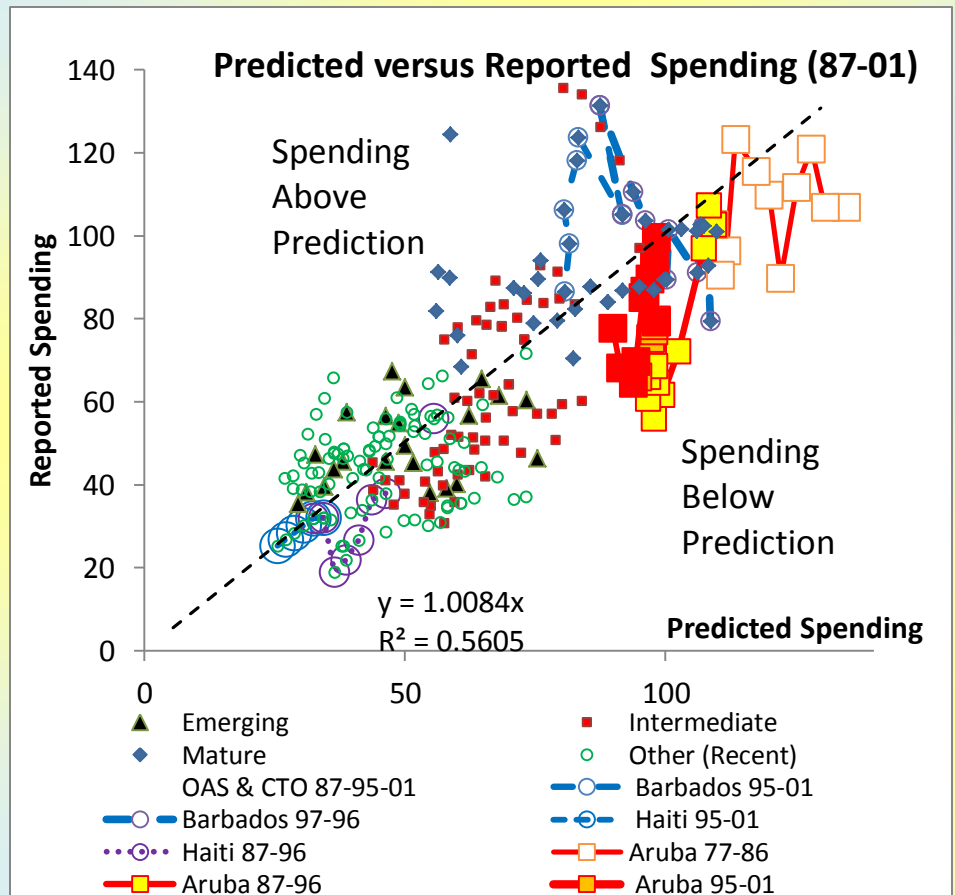


## 12. Aggregate Innovation and Destination Performance

Over time the fitted curve shows a systematic shift that can be interpreted as

- improvements in product definition and synergies (corresponds to product innovation),
- efforts to limit congestion (i.e. process innovation),
- efficiencies to match local and global market competition (value Innovation).

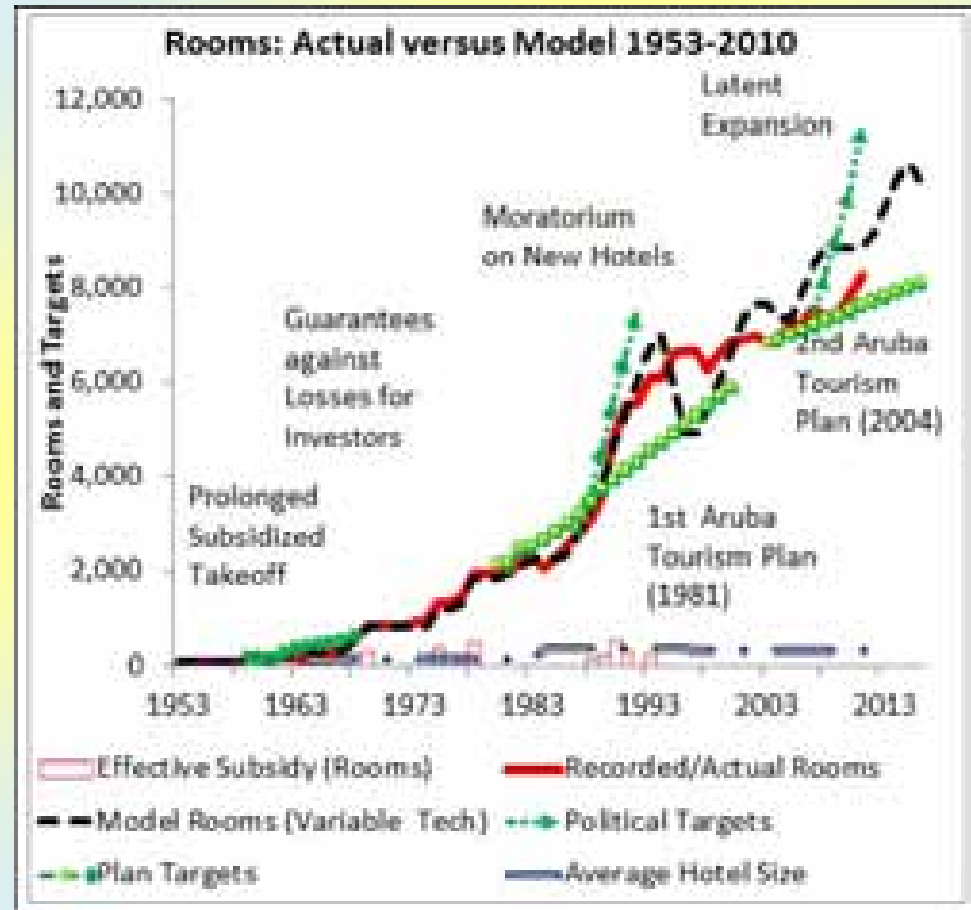
Tourism technologies, and their pace of change, are estimated for Caribbean destinations in terms of their success in synergistic positioning and the amelioration congestion in confronting global competition.



### 13. Reconstructing a Destination's Tourism History

The model has been applied with parameters characteristic of the Aruba industry to track the Island's tourism trajectory over the last half century though the early unsettled years, tourism manifestos and plans, a mid-life crisis, rapid growth and repositioning, and an uneasy present.

Overall, the model provides a plausible narrative for the Island and suggestions about how she may meet her various targets for revenues, income, employment, and sustainability.

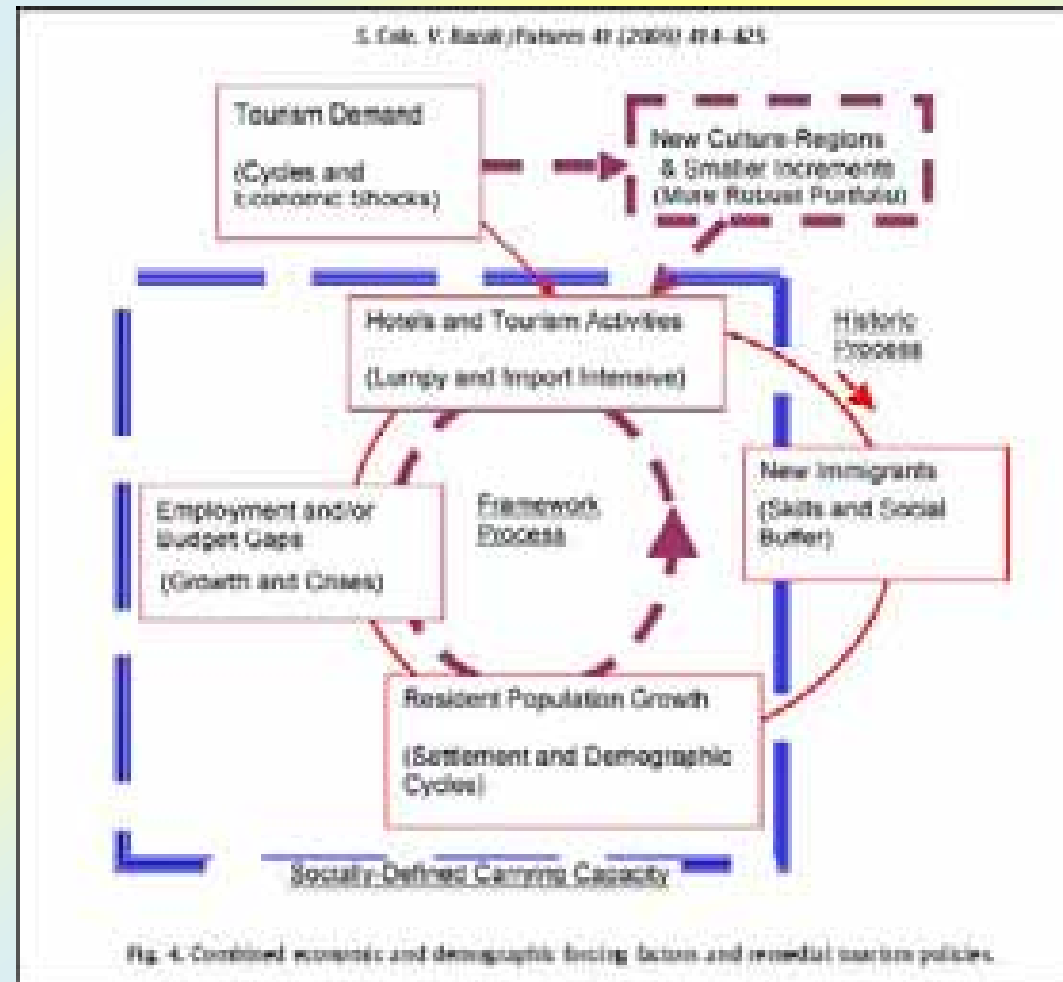


## 14. How Far and How Fast?

The rapid growth and style of tourism in Aruba (initially introduced to offset high unemployment) later served to “pump” new population into the Island, with an “echo” in the domestic labor force a decade or so later.

Interactions with the investment cycles and other less regular shocks incite a variety of “complex” behaviors.

One solution is to introduce counter cyclical markets and variable leveraging incentives.



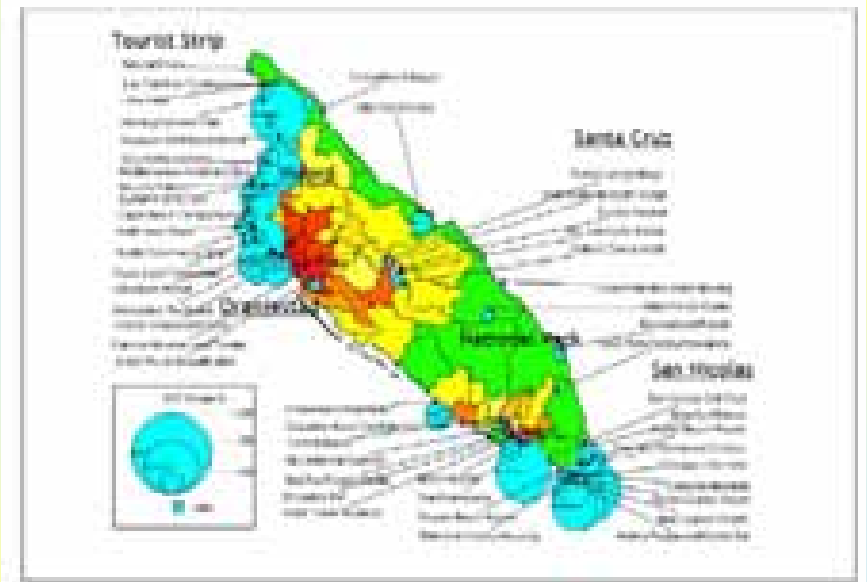
## 15. A Sustainable Culture-Region Framework

The “Framework” build upon the existing successful tourism development in Aruba, but seeks to reduce disruptions from variability in demand and the “lumpiness” of new hotel construction, and at a pace consistent with present and future Aruban needs.

Upgrade the existing stock and expand the Island’s tourism portfolio into new culture regions via tourism clusters based on smaller hotels and regional assets. (see Razak, 2007).

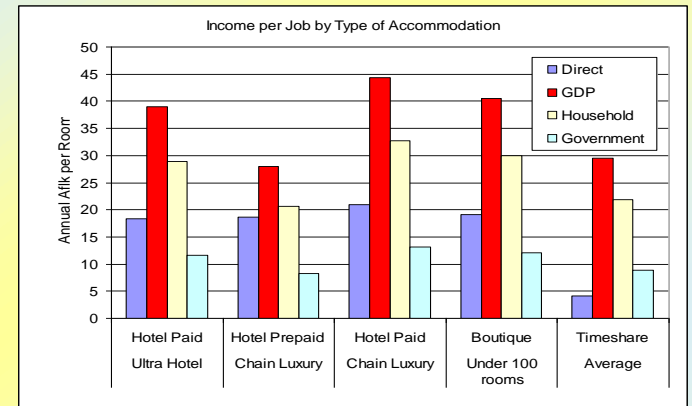


Figure 8. Culture regions and proposed products showing present population density and anticipated new employment by 2020.

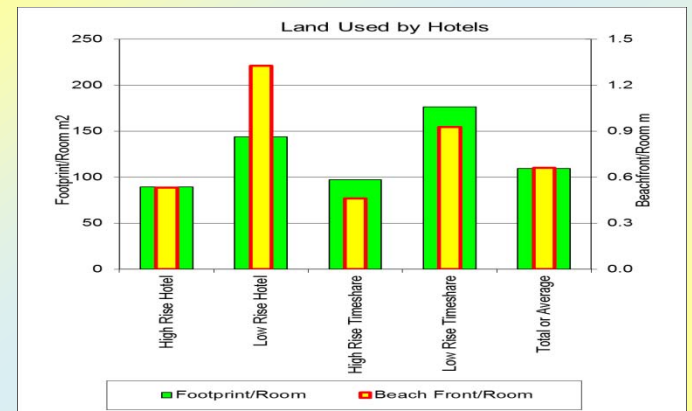


## 16. Community Impacts and Aspirations

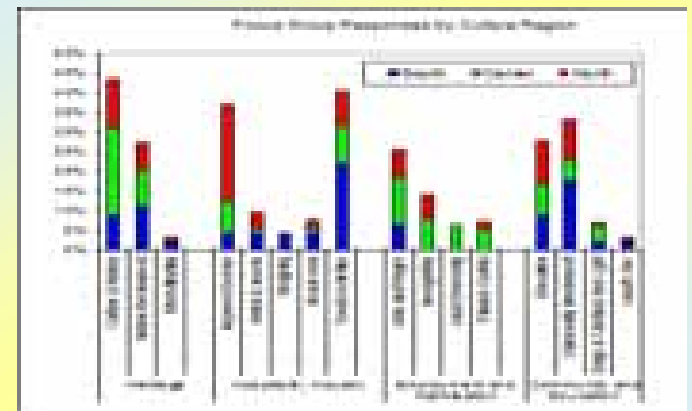
**Income from Tourism:** The figure charts total (direct and indirect) income to businesses, households, and government of different types of accommodation. Income from luxury chain hotels is greatly reduced by tax holidays, other incentives and leakages. Independent luxury and boutique hotels appear to provide at least as much retained income.



**Tourism Footprint:** The tourism footprint per room, beachfront per room, and other land-use “multipliers” vary across different styles of hotel, tourists, residents, and their homesteads. Land use, including all support activities -residence, supporting business, and government - was found to be some six times that required for tourism accommodation and associated tourist activities.



**Culture Region Focus Groups:** Focus groups in every Island barrio commented on the initial recommendations of the Framework to incorporate local needs and proposals and allay fears for the future.





## Appendix: Model Equations

The attractiveness of a destination combines the intrinsic perceived attractiveness,  $B(t)$ , the requisite variety or synergistic agglomeration stylized as  $(1 + N_t/A(t))$ , and the congestion or carrying capacity,  $(1 - N_t/C(t))$ .  $N_t$ , the total accommodation at a destination changes in discrete increments  $h$  while the destination- and global-level parameters  $A(t)$ ,  $B(t)$ , and  $C(t)$  change continuously. Parameters  $t$ ,  $y$ ,  $k$ , and  $e$  are the decision lag, discount horizon, capital cost, and operating costs.

$$N_{t+1} = N_t + N_t \alpha_t y / k [B(t) \{1 + N_t/A(t)\} \{1 - N_t/C(t)\} - e]_h$$

The chaos management approach conceptualizes growth potential  $\mu$  as a variant of risk-propensity in portfolio management so that a specified  $\mu = \mu_d$  becomes a destination's propensity for chaos. Thus, the leveraging  $\alpha$ , appropriate to the level of risk of instability is

$$\alpha_t = \{\mu_d - 1\} / [y / k \{B(1 + N_t/A) - e\}]$$

The model is an extension of the discrete logistic equation (DLE). Please refer to the cited papers for a more detailed explanation.

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